CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

BOARD ORDER NO. R6-2025-0016
WDID NO. 6B368010002

REVISED WASTE DISCHARGE REQUIREMENTS FOR DESERT OASIS DAIRY

San Bernardino County

The California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. Facility

   The Desert Oasis Dairy (formerly B & E Dairy) is a privately owned open lot milk cow dairy that is designed to accommodate up to 3,200 milking cows and up to a total of 3,890 animals combined.

   The Desert Oasis Dairy is a confined animal facility (CAF) and consists of two separate independent dairies, Dairy No. 1 and Dairy No. 2. Each dairy has a milking parlor, corrals, supply well, and wash water wet well. Both dairies discharge their dairy wash water and manure to common crop fields. For the purpose of this Order, the Desert Oasis Dairy is referred to as the "Facility." A map of the Facility is included as Attachment A, which is made part of this Order.

2. Facility Location

   The Facility is located on a 297-acre dairy site adjacent to and north of the Mojave River, approximately three miles west of the City of Barstow as shown in Attachment A. The Facility is located within Section 3, Township 9 North, Range 2 West, San Bernardino Base & Meridian. The Facility maintains an office location at 26599 Community Boulevard in Barstow for mail service.

3. Discharger

   Jack Van der Holst is the owner and operator of the Desert Oasis Dairy and is referred to as the "Discharger."

4. Reason for Action

   This Order is being issued to update and revise the existing Waste Discharge Requirements (WDRs) to reflect existing Facility conditions, require the establishment of an adequate groundwater monitoring network, and general updates to the Order and Monitoring and Reporting Program (MRP).

5. Order History

On September 17, 1981, the Water Board adopted Board Order No. 6-81-67 establishing WDRs for the Facility. On July 1, 1986, the Water Board adopted Board Order No. 6-86-83 revising the WDRs. The Water Board revised the WDRs on October 13, 1989, and again on February 8, 1996, under Board Order No. 6-89-190 and Board Order No. 6-96-9, respectively.

6. Facility Operations and Wastes Generated

The Facility encompasses 297 total acres. Barns, corrals, and other infrastructure are located on 117 acres and crop fields comprise the remaining 180 acres. Grazing is the harvesting method for the crop fields. As of 2025, the dairy is operating with 2,150 milking cows and approximately 340 additional animals for a total herd size of approximately 2,470 animals. Herd size can fluctuate due to operational need and economic considerations but will not exceed the design capacity of 3,200 milking cows and up to a total of 3,890 animals combined. Two supply wells (Supply Well No. 1 and Supply Well No. 2) provide fresh water for operation. At full operation, the Facility generates and discharges the following types of wastes.

a. Dairy Wash Water

Dairy wash water is a type of wastewater that is generated when the cows are washed prior to each milking cycle and when the milking parlor is cleaned after each milking cycle. The dairy wash water contains a mixture of water, liquid manure, and manure. A combined total of approximately 20,000 gallons of dairy wash water (both dairies) is generated per day. The dairy wash water is contained within the Facility in two separate wet wells (underground concrete cisterns) located adjacent to each milking parlor (Dairy No. 1 and Dairy No. 2). The dairy wash water is pumped from the wet wells and disposed of at crop fields (Northern Crop Field, Central Crop Field, and Southern Crop Field) within the Facility by the use of “Big Gun” sprinkler irrigation systems.

b. Manure

Approximately 2,523 dry tons of manure is generated per year. Some of the dry manure is used on crop fields, the remaining is sold and transported off-site.

Liquid manure (feces with urine) is generated in the corrals and feeding lanes. The corrals and feeding lanes are sloped to drain to a collection system (concrete-lined channels and drains) that discharges to the storm water ponds. Manure and liquid manure within the corrals mixes with storm water during rain events.

c. Storm Water

Storm water runoff from the corrals flows overland to a collection system (concrete-lined channels and drains) located at a lower elevation than the corral and is discharged to the storm water ponds. Some of the shelters are equipped with rain

gutters that discharge directly into the collection system. The storm water ponds are located on the south end of the Facility and are unlined.

7. Authorized Disposal Locations

The only authorized disposal site for dairy wash water and manure are the designated 180 acres of crop fields. The only authorized disposal site for storm water generated within the corrals is the storm water ponds located on the south end of the Facility.

8. Land Uses

The surrounding land includes the following uses: to the north is old highway 58 and open desert; to the south is the Mojave River which flows from a westerly to easterly direction; to the west and east are low density residential properties.

9. Site Topography

The Facility is in the Middle Mojave Hydrologic Area north of and adjacent to the Mojave River, approximately three miles west of the city of Barstow. The site topography slopes from north to south, towards the Mojave River. The Mojave River borders the south end of the dairy site. A San Bernardino County flood control berm is located between the Facility and the river.

10. Climatology

The Facility is in the Mojave Desert approximately three miles west of the city of Barstow. The area is characterized as high desert with warm summers and moderate winters. The summer average daily temperatures are 102 degrees Fahrenheit (°F) with low humidity levels. The average monthly low temperature in January is 35° F. The climate is characterized by low precipitation, abundant sunshine, frequent winds, moderate to low humidity, and high evapotranspiration. The average annual rainfall is about 4.6 inches.

11. Geology / Soil Conditions

The predominant soils underlying the Facility consist of coarse sand and gravel with cobbles and some clay. These soils have high permeability and are suited for irrigated crops, alfalfa hay, and livestock grazing.

12. Groundwater

The Facility is located in the Lower Mojave River Valley Groundwater Basin where groundwater generally flows to the east, consistent with the flow direction of the Mojave River. The depth to groundwater in this area can fluctuate significantly depending on conditions of drought and stormflows in the Mojave River. In March 2025, groundwater beneath the Facility was approximately 65 to 70 feet below ground surface (bgs). There are three monitoring wells located onsite at the Facility (see Attachment A). The monitoring wells were installed by the United States Geological Survey (USGS) in 1993

as part of a series of cooperative studies between the USGS and the Mojave Water Agency (MWA) to evaluate and address water supply and water quality issues along the Mojave River. Nested well MWF-1 was constructed with a shallow casing screened 35 to 55 feet bgs and a deep casing screened 100 to 120 feet bgs. The shallow casing of MWF-1 has been dry since 2012. Monitoring well MWF-2 is a single-casing well screened 140 to 160 feet bgs. Nested well MWF-3 was constructed with a shallow casing screened 100 to 120 feet bgs, a middle casing screened 165 to 185 feet bgs, and a deep casing screened 210 to 230 feet bgs. The wells are monitored by the Discharger and the data are reported in self-monitoring reports. Water level and water quality data collected by the USGS and MWA are available for these monitoring wells in the USGS' National Water Information System (NWIS).

Water quality data available on NWIS is generally consistent with water quality data reported for specific well casings by the Discharger. Since 2020, nitrate as nitrogen (nitrate-N) and TDS concentrations in the deep casing of MWF-1 (100 to 120 feet bgs) have ranged from 8.4 milligrams per liter (mg/L) to 11.1 mg/L and TDS concentrations have ranged from 620 mg/L to 774 mg/L. MWF-2 (140 to 160 feet bgs) nitrate-N concentrations ranged from 1.4 mg/L to 3.0 mg/L and TDS concentrations ranged from 370 mg/L to 480 mg/L since 2020. Nitrate-N concentrations in the shallow casing of MWF-3 ranged from 2.84 to 10.6 mg/L for the same time period. A 2020 sample collected from the shallow casing of MWF-3 (100 to 120 feet bgs) yielded a TDS concentration of 590 mg/L. The middle casing of MWF-3 (165 to 185 feet bgs) was sampled in 2020 and has not been sampled since. The 2020 sample collected from the middle casing of MWF-3 yielded a nitrate-N concentration of 2.8 mg/L and a TDS concentration of 410 mg/L. Since 2020, nitrate-N concentrations in the deep casing of MWF-3 (210 to 230 feet bgs) have ranged from 0.73 mg/L to 3.1 mg/L and TDS concentrations have ranged from 250 mg/L to 730 mg/L.

The Facility operates two supply wells. Supply Well No. 1 is located adjacent to Dairy No. 1, and Supply Well No. 2 is located adjacent to Dairy No. 2 (see Attachment A). Well Completion Reports for these wells are included in the 2012 Nutrient Management Plan & Waste Management Plan for B and E Dairy. Supply Well No. 1 is screened from 60 to 250 feet bgs. Supply Well No. 2 is screened from 46.59 to 189.25 and 209.58 to 227.0 feet bgs. Supply wells are designed to extract groundwater for supply use and generally have longer screened intervals than monitoring wells. During operation, these longer screen intervals can facilitate the extraction of groundwater from multiple hydrostratigraphic zones within the aquifer. Supply Well No. 1 water quality data indicates an increasing trend for nitrate-N since 2015. Water quality data from Supply Well No. 2 indicates an overall increasing trend for both nitrate-N and TDS since 2015. The sample from Supply Well No. 1 collected in December 2024 yielded concentrations of nitrate-N at 11.0 mg/L and TDS at 830 mg/L. The December 2024 water quality sample from Supply Well No. 2 yielded concentrations of nitrate-N at 47 mg/L and TDS at 1,100 mg/L.

The groundwater data show that water quality varies with depth in the aquifer beneath the Facility. Currently there is no upgradient monitoring well documenting the quality of groundwater before it flows beneath the Facility, and the existing groundwater

monitoring wells are not screened to monitor the top of the water table. This Order requires the Discharger to propose and implement an appropriate groundwater monitoring network that monitors the quality of groundwater at the top of the water table upgradient and downgradient of the Facility. An appropriate groundwater monitoring network is necessary to evaluate compliance with this Order and to evaluate the effectiveness of source control BMPs.

13. Lahontan Basin Plan

On March 31, 2005, and in subsequent amendments, the Water Board adopted the *Water Quality Control Plan for the Lahontan Region* (Basin Plan), which contains beneficial use designations and water quality objectives for waters of the Lahontan Region, contains programs of implementation to achieve water quality objectives. This Order implements the Basin Plan, as amended.

14. Receiving Waters and Beneficial Uses

The receiving waters are the groundwaters of the Lower Mojave River Valley Basin (California Department of Water Resources, Basin No. 6-40). Designated beneficial uses of the groundwaters of the Lower Mojave River Valley as set forth and defined in the Basin Plan include:

a. Municipal and domestic supply (MUN),
b. Agricultural supply (AGR),
c. Industrial service supply (IND),
d. Freshwater replenishment (FRSH), and
e. Aquaculture (AQUA).

15. Confined Animal Facilities

Chapter 4 of the Basin Plan, Implementation, section 4.10, Agriculture, page 4.10 - 6, Confined Animal Facilities, discusses the potential water quality impacts from CAFs and identifies some control measures and other guidance for CAFs. Potential water quality impacts are attributed to storm water runoff, dairy wash water, salt- and nutrient-laden leachate from animal feed and manure, sediment mobilization, and pathogens from manure. CAFs are identified as contributors to salt and nutrient loading in groundwater basins.

16. Source Control Best Management Practices

This Order requires the Discharger to implement appropriate Best Management Practices (BMPs) as source controls to minimize the potential for CAF waste discharges to adversely impact groundwater and the environment. There are a variety of BMPs available for waste management at CAFs. Many common BMPs have specific design standards adopted and propagated by the Natural Resources Conservation Service (NRCS, aka conservation practice standards). The most applicable conservation

practice standards are listed in Table 1. Further literature may be found at this link California | Field Office Technical Guide | NRCS - USDA.

Table 1: Applicable NRCS Conservation Practice Standards

NRCS Conservation Practice Standard	Function
313 Waste Storage Facility	Protect water quality from stored waste.
319 On-farm Secondary Containment Facility	Protect water quality from petroleum products.
355 Groundwater testing	Determine the quality of groundwater.
359 Waste Treatment Lagoon	Decrease nutrients, biochemical oxygen demand (BOD), and odors.
378, 520, 521, and 522 Pond and Pond Liners	Protect water quality from materials stored in a pond (aka impoundment structure).
561 Heavy Use Area Protection	Collect wastewater from production areas to protect water quality.
570 Storm Water Runoff Control	Lessen water quality and quantity impacts from storm water.
590 Nutrient Management	Ensure agronomic application of nutrient laden materials.
592 Feed Management	Decrease the nutrient and salt loads in manure.
629 Waste Treatment	Protect water quality using waste treatment systems.
632 Waste Separation Facility	Protect water quality through manure handling methods.
634 Waste Transfer	Protect water quality during waste transfer from production to storage.
635 Vegetated Treatment Area	Protect water quality through phytoremediation.

17. Maintenance of High Quality Waters in California, State Board Resolution 68-16, Degradation Analysis

State Water Board Resolution 68-16 (“Statement of Policy with Respect to Maintaining High Quality of Waters in California”, “Antidegradation Policy”) requires whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality must be maintained. High quality waters are those surface or groundwaters that have a baseline water quality better than required by water quality control plans and policies. Whether a waterbody is a high-quality water is a determination made on a water body by water body and constituent by constituent basis. The Antidegradation Policy only allows change in existing high-quality water if it has been demonstrated to the Regional Water

Board that the change is consistent with maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial uses of such water, and will not result in water quality less than that prescribed in the policies. The Antidegradation Policy further requires that discharges comply with WDRs that will result in the best practicable treatment or control of the discharge necessary to ensure that: (a) pollution or nuisance will not occur; and (b) the highest water quality consistent with the maximum benefit to the people of the state will be maintained. The Antidegradation Policy incorporates the federal "antidegradation" policy (Cal. Code Regs., tit. 40, § 131.12). This Order is consistent with the Antidegradation Policy.

The primary constituents of concern (COCs) from Facility discharges are salts (total dissolved solids), nutrients (e.g., nitrogen), and bacteria. The groundwaters of the Lower Mojave River Valley Basin are considered high quality for nitrate-N and TDS because the best water quality that has existed since 1968 is better than water quality objectives. A monitoring well, considered to be a down-gradient well for Desert Oasis Dairy, has been sampled at a non-detected concentration for nitrate-N in 2020 and 2021, and less than 1 mg/L in 2022. This same monitoring well has yielded a TDS concentration less than 500 mg/L in 2021 and 2022.

Nitrates and salts are typically associated with animal wastewater effluent. Public water supply wells owned by the Golden State Water Company, located approximately 1 to 1.5 miles downgradient of the Desert Oasis Dairy, have reported nitrate concentrations of up to 14 mg/L. This well is not immediately next to the dairy, and other sources, such as septic tank discharges, may be contributing to the nitrate concentrations detected in the well. In 2013, several private domestic wells along Waterman Road, located due east of the Desert Oasis dairy, were sampled by Lahontan staff and yielded nitrate-N concentrations of up to 19 mg/L. These values are above the water quality objective for the Mojave River and exceed the drinking water standard of 10 mg/L.

This Order establishes requirements and standards that will result in the implementation of BMPs. The implementation of the measures outlined in this Order will limit degradation and will not result in water quality less than that prescribed in the Lahontan Basin Plan. Requirements in this Order include:

Production Areas:

This Order includes requirements associated with the collection, treatment, storage discharge, or waste disposal on crop fields at agronomic rates depending on the type of crop, soil, climate, special local situations, management system, and type of manure.

Land Application Areas:

This Order contains requirements for soil sampling to ensure that overapplication of nutrients and salts does not occur and is protective of water quality. Additionally, this Order requires submission and implementation of a NMP that includes BMPs to maximize nutrient uptake by plants and minimize the pass-through and infiltration of nutrients and salts into the groundwater. This Order also ensures that dry manure is not applied at rates greater than the agronomic rate, as determined by a certified

agronomist, certified crop advisor, or soil scientist. Furthermore, this Order requires that outdoor manured areas be designed and maintained to convey all water that has contacted animal wastes or feed to flow to storm water impoundments, to minimize standing water within 72 hours after a storm event defined in Requirement II.G.1, and to minimize the percolation to groundwater. This Order also extends to crop fields not having any standing water 72 hours after a storm event defined in Requirement II.G.1.

These requirements will result in the best practicable treatment or control of the discharge. After effective source control, treatment and control measures required by the WDR are implemented, discharges from the Desert Oasis Dairy are not expected to unreasonably affect present and anticipated beneficial use of such water and exceed water quality objectives.

Degradation of high-quality water that results from discharges regulated by this Order is consistent with the maximum benefit to the people of the State. The Desert Oasis Dairy is located in the rural areas of the city of Barstow. The ongoing operation of the Desert Oasis Dairy, and the ability to continue its operation benefits the economic prosperity of the local communities. The Desert Oasis Dairy plays an important role in providing milk and food supplies to the people of California. Maintaining the industry in the rural community of Barstow provides economic support and value to local communities. The operation of the Desert Oasis Dairy includes a socio-economic benefit to the local communities from businesses related to the operation of the dairy, such as nutritionist, veterinarians, tractor and equipment supplies, personnel from the energy and food sectors such as natural gas deliveries, hay, and feed deliveries. Tire shops and accessories for equipment, including service personnel, all benefit from the operation of the Desert Oasis Dairy. The Board finds that coupled with the environmental and water quality benefits that will result from implementation of the conditions in the Order, maintaining the dairy industry is consistent with the maximum benefit of the people of the state to prevent a loss of jobs and adverse impacts to local rural communities.

The groundwater monitoring program monitors the quality of groundwater upgradient and downgradient of the Desert Oasis Dairy site through the collection of groundwater samples for laboratory analysis and field measurement of water quality parameters. This Order includes a Monitoring and Reporting Program (MRP) that requires the sampling for general minerals, nitrate, and TDS. These results must be reported to the Water Board on a semi-annual basis frequency. The requirements in the MRP include monitoring for dairy wash water, manure, plant tissue, and soil in each land application area for TDS prior to watering crops. This information is useful to aid in evaluating nutrient management on the individual land application areas of the dairy and ensuring that water quality objectives are not exceeded. Sampling results are used to develop, revise, and implement improved BMPs and implement the NMP.

Implementation of source control BMPs, including the updated NMP measures, and the implementation of the NRCS standards and other requirements in this Order will result in the control of discharges. In addition, this Order requires the Discharger to manage waste to minimize odors and prohibit nuisance conditions. The requirements described above, and their implementation, will prevent pollution or nuisance conditions through

the proper management of site conditions. Monitoring of groundwater quality downgradient of the Facility will be used to verify compliance with Order requirements. Therefore, any degradation of high-quality water that results from discharges regulated by this Order is consistent with the Antidegradation Policy.

18. California Water Code, Section 13241 Considerations

Pursuant to Water Code section 13241, the requirements of this Order take into consideration the following factors.

a. *Past, present, and probable future beneficial uses of water* – The receiving waters are the groundwaters of the Lower Mojave River Valley Basin. The best management practices and receiving water limitations in this Order are based on water quality objectives and will not adversely affect present or probable future beneficial uses of groundwater, including municipal and domestic supply, agricultural supply, industrial service supply, and freshwater recharge.

b. *Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto* – The Desert Oasis Dairy is in the southern portion of the Lahontan Region, specifically the Mojave Desert that is characterized as high desert and is increasingly urbanizing and dependent upon groundwater from the Lower Mojave River Valley Groundwater Basin. Precipitation amounts at the location of the Facility averages approximately 4.6 inches per year. The topography, soils, and microclimate support a corresponding variety of high desert plant and animal communities.

c. *Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area* – Compliance with the requirements of this Order will protect groundwater quality. The Water Board will use its existing authority and these WDRs to ensure protection of water quality from these discharges.

d. *Economic considerations* – The most economically efficient option for the Desert Oasis Dairy is onsite discharge as land application to agricultural crop areas. Discharger may incur costs to install and improve infrastructure for containing and properly disposing of dairy wash water and manure at agronomic rates in accordance with an approved NMP.

e. *The need for developing housing within the region* – The Order will not directly affect housing availability in the region.

f. *The need to develop and use recycled water* – The Order allows the discharge of dairy wash water (wastewater) for irrigation of crops at agronomic rates. While this is a beneficial reuse of wastewater, this wastewater is not subject to the water recycling criteria adopted by the State Water Board, Division of Drinking Water, because it is not sourced from domestic sewage. The Order will not directly affect the need to develop and use recycled water.

19. Human Right to Water

It is the policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring Dischargers to meet water quality objectives, designed to protect human health and ensure that water is safe for domestic use.

20. CCR, Title 27 Considerations

California regulations governing discharges from CAFs are contained in California Code of Regulations (CCR), title 27, at sections 22560 et seq (Title 27). These regulations prescribe minimum standards for discharges of animal waste at CAFs. For surface water protection, title 27 includes requirements for the design of containment facilities for both storm water and process wastewater and for adequate flood protection. For groundwater protection, the minimum standards in title 27 require CAFs to minimize percolation of wastewater to groundwater in applied fields, apply manure and wastewater to crop fields at reasonable agronomic rates, and minimize infiltration of water into underlying soils in manured areas. This Order incorporates relevant criteria for CAFs pursuant to CCR, title 27, sections 22560 through 22565.

21. Technical and Monitoring Reports

CWC, section 13267, provides the Lahontan Water Board with the authority to require technical and monitoring reports. Such technical reports are required by this Order, and the Monitoring and Reporting Program (MRP) that is attached to and made part of this Order.

The reports required by this Order are necessary to ensure the Discharger takes actions to demonstrate compliance and ensure water quality is protected. As such, the burden, including costs, of this monitoring bears a reasonable relationship to the need for that information and the benefits to be obtained from that information.

The Executive Officer may authorize additions or changes to monitoring and reporting requirements pursuant to CWC, section 13267.

22. California Environmental Quality Act

These WDRs govern an existing facility which the Discharger is currently operating. The project consists of updating and upgrading the existing waste discharge requirements, and is therefore, exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Sections 15301 and 15302, Chapter 3, Title 14, California Administrative Code.

23. Public Notification

The Lahontan Water Board has notified the Discharger and interested agencies and persons of its intent to revise WDRs for this Facility and has provided them with an opportunity to submit their written views and recommendations.

24. Public Hearing

The Lahontan Water Board, in a public hearing, heard and considered all comments pertaining to this matter.

IT IS HEREBY ORDERED, pursuant to Water Code sections 13263, that Board Order No. 6-96-9 is rescinded (except for enforcement purposes), and, pursuant to Water Code sections 13263 and 13267, that the Discharger must comply with the following:

I. RECEIVING WATER LIMITATIONS

A. The discharge must not cause, under any circumstances, the presence of the following substances or conditions in groundwaters of the Lower Mojave River Valley Groundwater Basin.

1. Bacteria – Groundwater designated as MUN must not contain a median concentration greater than or equal to 1.1 most probable number per 100 milliliters (1.1 MPN/100 mL) of coliform organisms during any seven-day period.

2. Chemical Constituents – Groundwater designated as MUN must not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified in the following provisions of CCR, title 22, which are incorporated by reference into the Basin Plan: Inorganic Chemicals, Table 64431-A of section 64431; Organic Chemicals, Table 64444-A of section 64444; SMCLs–Consumer Acceptance Limits, Table 64449-A of section 64449; and SMCLs – Consumer Acceptance Ranges, Table 64449-B of section 64449. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect.

   Groundwater designated as AGR must not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses (i.e., agricultural purposes).

   Groundwater must not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.

3. Taste and Odors – Groundwater must not contain taste or odor-producing substances in concentrations that cause nuisance or that adversely affect beneficial uses. For groundwater designated as MUN, at a minimum, concentrations must not exceed adopted secondary maximum contaminant levels specified in CCR, title 22, Table 64449-A of section 64449 (SMCLs–

Consumer Acceptance Levels; Table 64449-B of section 64449 (SMCLs – Consumer Acceptance Ranges). This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect.

II. REQUIREMENTS

A. General

1. The Discharger must implement BMPs that meet or exceed applicable NRCS conservation practice standards for California listed in table 1. (Refer to NRCS website for Field Office Technical Guide applicable to California for conservation practice standards at California | Field Office Technical Guide | NRCS - USDA [https://efotg.sc.egov.usda.gov/#/state/CA/documents/section=1&folder=1041].)

2. The Discharger must ensure that all site operating personnel are familiar with the contents of this Order. A copy of the Order, and technical reports required by the Order (not including previously submitted monitoring reports) must be kept on the Facility premises and be available to operating personnel and Water Board staff.

3. The Discharger must implement BMPs in the collection, treatment, storage, discharge, or waste disposal system to prevent odor pollution or nuisance.

B. Dairy Wash Water

1. Dairy wash water generated at the Facility must be collected, transferred, and stored in the wet well (or other approved temporary storage containment) for use on crop fields at agronomic rates.

2. The wet wells must be planned and designed to have adequate storage capacity to handle inflow of dairy wash water from the miking barns without being overtopped. A backup pump and generator must be available and used in case of power failure or pump failure. Wet wells must be constructed of impervious material such as cement or other material to contain the dairy wash water.

3. Discharges of dairy wash water to crop fields must not result in surface runoff from applied fields and must be managed to minimize percolation to groundwater (CCR, title 27, section 22563[b]).

4. The Discharger must implement BMPs to minimize ponding of dairy wash water on crop fields.

C. Crop Fields

1. The Discharger must implement BMPs to prevent runoff and ponding of storm water in crop fields within 72 hours following a storm event described in Board Order Requirement II.G.1.

2. Application of manure and dairy wash water to crop fields must be in accordance with an approved NMP and at rates which are reasonable for the crop, soil, climate, special local situations, management system, and type of manure (CCR, title 27, section 22563[a]).

3. Any spray irrigation of dairy wash water on crop fields must be implemented in a manner which contains the dairy wash water within the crop field.

D. Corrals

1. Corrals and other manured outdoor access areas must be graded to ensure positive drainage of wastewater to the storm water collection system located along the sides of the corrals and access areas (CCR, title 3, section 646.1).

2. There must be no standing water in the corrals 72 hours after a storm event defined in Requirement II.G.1.

3. Corrals must be appropriately compacted to minimize the infiltration of water into the underlying soils.

4. Feeding areas inside the corrals must be paved with concrete or similar impervious materials to prevent urine and liquid manure from penetrating into the ground. The concrete pad must be sloped to convey drainage toward the outside of the corrals (away from feeding walls) and must be at least 10-feet wide (CCR, title 3, section 646.1). The concrete pad must be scraped, flushed or vacuumed periodically to reduce manure buildup.

5. Areas within corrals used for drying manure must be kept separated from areas within corrals used for storing manure purposes.

E. Manure Management

1. Manured and manure stockpile areas must be managed to minimize infiltration of water into underlying soils (CCR, title 27, section 22564).
2. Offsite storm water flows must be diverted away from manure areas.
3. Outdoor confinement manure areas must be designed and maintained to convey all water that has contacted animal wastes or feed to flow to storm water impoundments, to minimize standing water within 72 hours after a storm event defined in Requirement II.G.1, and to minimize the percolation to groundwater.
4. Manure that is stockpiled in the corrals until it is dry must be removed from the corral area within 3 months.
5. Dry manure that is stockpiled outside the corrals must be maintained with BMPs that will prevent run-off of manure-laden water during storm events.

F. Feed Waste and Containment

1. The outdoor confinement feed storage area(s) must be designed and maintained to convey all water that has contacted animal wastes or feed to a wastewater storage facility, to minimize standing water within 72 hours after the last rainfall event, and to minimize the infiltration of water into the underlying soils.

G. Storm Water

1. The Facility must be designed and constructed to retain all wastewater generated, together with all precipitation on, and drainage through, manured areas during a 25-year, 24-hour storm (CCR, title 27, section 22562 [a]).
2. The storm water basins and manured areas must be protected from inundation or washout by overflow from any stream channel during 20-year peak stream flows (CCR, title 27, section 22562 [c.1]).
3. Storm water runoff from the corrals must be contained in the storm water basins.
4. All precipitation and surface drainage outside of manured areas, including that collected from roofed areas, and runoff from tributary areas during the storm events described in Requirement II.G.1 above, must be diverted away from manured areas unless such drainage is fully retained (CCR, title 27, section 22562 [b]).

H. Groundwater Monitoring

1. The Discharger must propose and monitor a groundwater monitoring network to evaluate compliance with this Order and to evaluate effectiveness of source control BMPs. The groundwater monitoring network must be designed to monitor the water quality at the top of the water table upgradient and downgradient of the Facility. A minimum of three groundwater monitoring wells (one upgradient and two downgradient) is required for the monitoring network.

2. The construction, repair/maintenance, abandonment, or destruction of groundwater monitoring wells must be in accordance with the standards under water wells and monitoring wells in the California Well Standards Bulletin 74-81 (December 1981) and Supplemental Bulletin 74-90 (June 1991), adopted by the California Department of Water Resources (DWR). This incorporation-by-reference is prospective, including future changes to the incorporated California Well Standards as the changes take effect. Should any county or local agency have more stringent standards than that adopted by DWR, then these local standards must supersede the well standards of DWR, and the Discharger must comply with the more stringent standards.

III. PROHIBITIONS

A. Creation of pollution or threatened pollution, contamination, or nuisance as defined by CWC, section 13050, is prohibited.

B. The discharge of waste classified as hazardous (CCR, title 22, section 66261) is prohibited.

C. The discharge of waste to surface waters is prohibited.

D. The discharge of pesticides to surface waters and groundwater is prohibited.

E. The discharge of waste except to the authorized discharge locations identified in Finding No. 7 in this Board Order is prohibited.

F. The application of dairy wash water to crop fields that would result in runoff from the land is prohibited.

G. The land application of manure or dairy wash water to crop fields for purposes other than providing nutrients or as a soil amendment in accordance with an approved NMP is prohibited.

H. Spray irrigation of dairy wash water is prohibited outside the crop fields.

I. The direct discharge of dairy wash water into groundwater via backflow through water supply or irrigation supply wells is prohibited.

J. The use of manure to construct impoundment structures or to repair, replace, improve, or raise existing impoundment structures is prohibited.

IV. PROVISIONS

A. Licensed Professionals

1. A California licensed professional civil engineer must prepare any new or updated waste management system design, including drawings and reports, operation and maintenance plans, and certify the as-built condition of any newly constructed waste management system component(s).

2. A California licensed professional geologist must prepare groundwater monitoring well installation work plans and certify as-built well completion reports.

3. A California licensed surveyor must survey groundwater monitoring wells (e.g., northing and easting, ground surface elevation, top of casing elevation, top of monument elevation, and well measuring point), which is to be included in any as-built well completion reports.

4. A Certified Professional Agronomist (CPAg from the American Society of Agronomy), a Certified Professional Soil Scientist (CPSS from the American Society of Agronomy), a Certified Crop Advisor (CCA from the American Society of Agronomy), Technical Service Providers certified in nutrient management in California by the NRCS, or NRCS certified planner with job approval authority in NRCS standard 590 Nutrient Management, must prepare the NMP in accordance with the requirements listed in Attachment B which is made part of this Order.

B. Standard Provisions

The Discharger must comply with the Standard Provisions for Waste Discharge Requirements in Attachment C which is made part of this Order.

C. Monitoring and Reporting

Pursuant to CWC, section 13267, subdivision (b), the Discharger must comply with the monitoring and reporting requirements as established in the attached MRP No. R6-2025-0016 and as specified by the Executive Officer. The MRP may be modified by the Water Board Executive Officer.

D. Electronic Submittal of Information

Pursuant to CCR, title 23, section 3893, all technical reports, laboratory analytical results (including but not limited to soil and water data), groundwater monitoring well survey data, site maps, groundwater monitoring well construction logs, boring logs, and depth to groundwater must be uploaded electronically over the internet to the State Water Board's GeoTracker website. This requirement is in addition to, and not superseded by, any other applicable reporting requirement.

V. REPORTING FACILITY CHANGES

A. Material Changes

Pursuant to CWC, section 13260(c), any proposed material changes in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, requires submittal of an updated ROWD and Nutrient Management Plan (NMP). The Discharger must submit the updated ROWD and NMP to the Water Board at least 120 days prior to making any material change. Material changes include, but are not limited to, any of the following:

1. Increase in area or depth used for waste storage or application areas beyond that allowed in the ROWD.
2. Significant change in storage or application method, location, or volume (e.g., change from irrigation application to retention inside an impoundment; this Board Order does not allow subsurface discharge).
3. Change in herd size above the design capacity of the Facility as described in Finding No. 1.

B. Closure of the Facility

A notice must be submitted to the Water Board at least 30 days in advance of Facility closure on either a temporary or permanent basis. Water Board staff will inspect the Facility and may request additional site-specific closure requirements, in addition to those described below.

1. All discharges must have ceased, and all waste removed (e.g., manure, dairy wash water), and properly disposed of in a manner that does not pose a threat to surface water or groundwater quality or create a condition of nuisance.
2. Storm water impoundments must be cleaned after all water in the impoundment(s) has evaporated or percolated, manure removed, and properly disposed, and these areas graded back to the adjacent land topography elevation to prevent standing water during storm water events.
3. All manure (packed or unpacked) must be removed from the corrals, animal housing areas, and CAF sites. All areas are to be graded with cleaned contour lines to eliminate water ponding in corrals and other affected areas.
4. After consulting with Water Board staff, agricultural wells, supply wells, and groundwater monitoring wells must be managed according to DWR's California Well Standards Bulletin 74-81 (December 1981) and Supplemental Bulletin 74-90 (June 1991). If wells will not be used in the future, they must be destroyed. If wells will be used in the future, then the well must be maintained in an inactive status, as required by DWR California Well Standards to prevent water quality impairment, have a closed well casing with secured cover, be marked and easily visible, and the surrounding area kept clear of brush, debris, and waste materials.
5. Those areas where manure has been removed, a visual inspection of the soil at representative areas must be made to ensure native soil is present. Photo documentation to show the demarcation down to native soil for each area is required to be submitted to the Water Board. Water Board staff may inspect the areas within corrals, animal housing areas, outdoor access areas, and below the storm water impoundments to verify complete removal of manure from the CAF.

VI. REQUIRED PLANS AND REPORTS

A. Groundwater Monitoring Well Network

Pursuant to the CWC, section 13267, the Discharger must submit the following:

1. **No later than 180 days** following the adoption of this Order, the Discharger must submit for Water Board staff review and concurrence a work plan for the installation of additional monitoring wells, establishing a groundwater monitoring network consisting of at least three (3) groundwater monitoring wells (one upgradient and two downgradient) to adequately monitor water quality upgradient and downgradient of the Facility. Prior to constructing the well network, a work plan must be submitted to include:

    a. Proposed new well location(s) on a Facility site map that includes existing well locations.

    b. Proposed well design: casing diameter and material; screen interval, slot size, and depth of well; drilling method; well development and purging methods; and waste handling and disposal.

c. A list of initial water quality analyses that includes the constituents of concern in MRP No. R6-2025-0016, Attachment A.

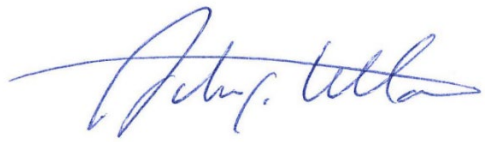
2. **No later than 12 months** after work plan approval, the Discharger must implement the approved work plan and submit to the Water Board notification of well installation completion.

3. **No later than 90 days** following well installation, the Discharger must submit to the Water Board an As-Built Well Completion Report. The report must include, at minimum, the drillers log, field data sheets, water quality analytical data and laboratory report, a Facility site map showing all well locations, and survey data (coordinate location in decimal degrees, top of casing elevation in feet above mean sea level [amsl], and ground surface elevations in feet amsl).

B. Nutrient Management Plan

1. **Within 6 months** of Board Order adoption, the Discharger must submit an updated Nutrient Management Plan in accordance with the requirements outlined in this Order and Attachment B for Water Board staff's review and acceptance.

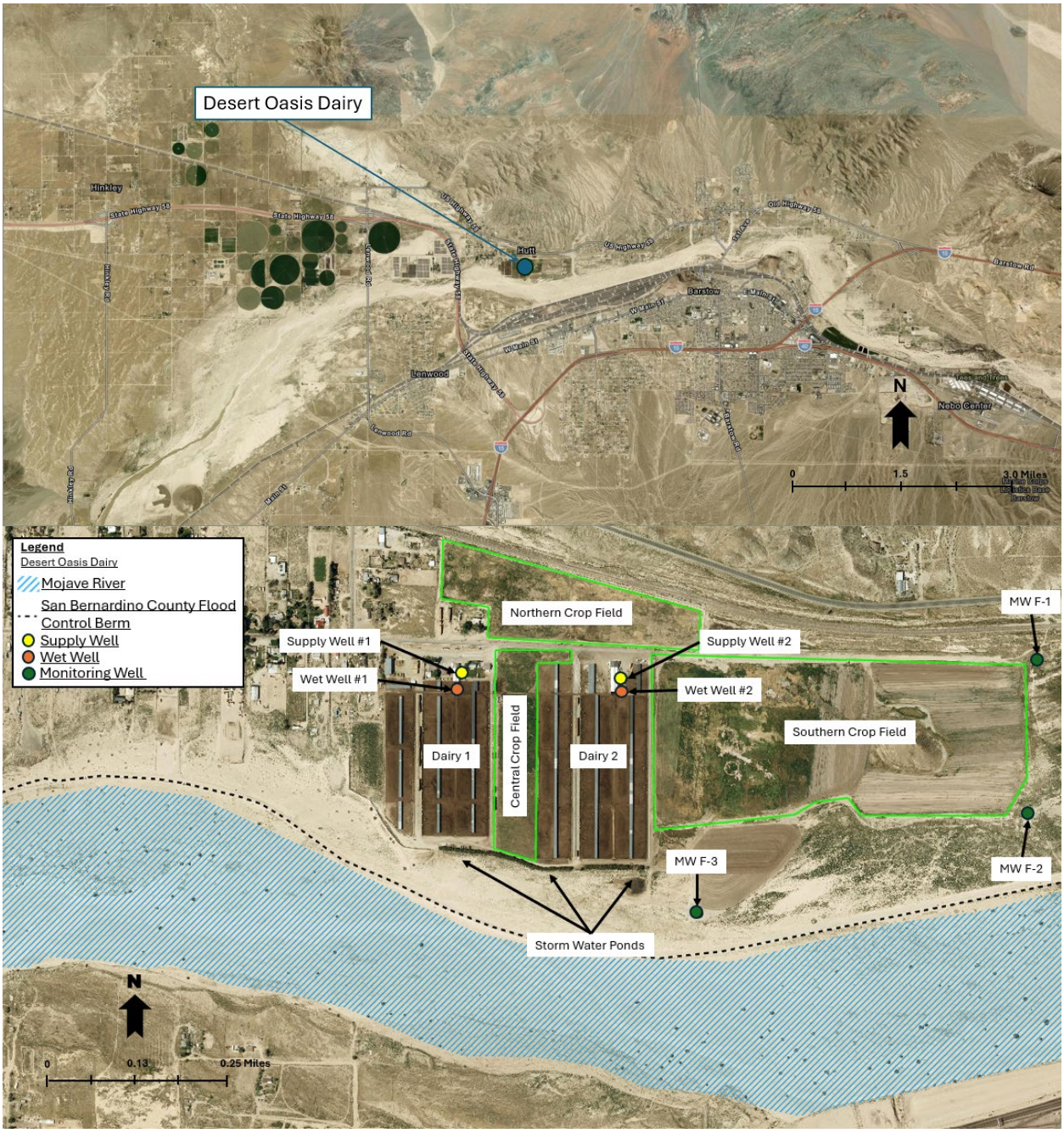
I, Ben Letton, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on May 13, 2025.



_____
BEN LETTON
EXECUTIVE OFFICER

Attachments: A. Facility Location Map, Desert Oasis Dairy
B. Nutrient Management Plan Requirements
C. Standard Provisions for Waste Discharge Requirements

Attachment A – Facility Location Maps, Desert Oasis Dairy



ATTACHMENT B

NUTRIENT MANAGEMENT PLAN REQUIREMENTS

Board Order No. R6-2025-0016 issued to Jack Van der Holst (Discharger) for the Desert Oasis Dairy (Facility) requires an update to the Facility-specific Nutrient Management Plan (NMP). The purpose of the NMP is to budget and manage the nutrients applied to the crop field area(s), considering all sources of nutrients, crop requirements, soil types, climate, and local conditions, to prevent adverse impacts to groundwater quality. The NMP must take the site-specific conditions into consideration in identifying steps that are protective of water quality and will minimize nutrient movement through surface runoff or leaching past the root zone of crops. The NMP must be updated annually, or as needed, in response to changing conditions, monitoring results, and other factors.

Nutrient Management Plan Principles

The NMP must be developed by a specialist who is certified in developing nutrient management plans. A Certified Professional Agronomist (CPAg from the American Society of Agronomy), a Certified Professional Soil Scientist (CPSS from the American Society of Agronomy), a Certified Crop Advisor (CCA from the American Society of Agronomy), Technical Service Providers certified in nutrient management in California by the Natural Resources Conservation Service (NRCS), or NRCS certified planner with job approval authority in NRCS standard 590 Nutrient Management. The following steps are critical components of the NMP.

1. Dairy wash water application must be based on the nutrient needs of the crop, the daily water uses of the crop, and the water-holding capacity of the soil. Avoid excessive dairy wash water application when soil is saturated and there is excessive nitrate on the ground.
2. The timing of nutrient application must correspond as closely as possible with plant nutrient uptake characteristics, weather and climatic conditions, and land application area accessibility.
3. The NMP must provide detailed information showing that the growing crops will be able to use nutrients contained in dairy wash water during the colder months of November through March. If the crops cannot use the generated dairy wash water nutrients, the NMP must specify what measures will be taken to reduce or eliminate dairy wash water application (e.g., by water conservation practices, herd size reduction, use of storage tanks or vessels, or construction of lined retention (evaporation) pond(s) to store dairy wash waters during the colder months).

Nutrient Management Plan Contents

The NMP must identify the name and address of the Facility, the Facility operator, legal owner of the Facility property and must contain all the following elements.

1. Land Application Area Information

   Provide information for each crop field area (under the Discharger's control, whether it is owned, rented, or leased, to which manure or dairy wash water from the production area is or may be applied for nutrient recycling) on a map (topographic map or aerial photo) at an appropriate scale which includes the following information.

   A. A field identification system such as Assessor's Parcel Number; land application area by name or number; total acreage of each land application area; soil type; crops grown; indication if each land application area is owned, rented, or leased by the Dischargers; indication of what type of waste is applied (solid manure only, dairy wash water only, or both solid manure and dairy wash water); drainage flow direction in each field; nearby surface waters; irrigation supply wells; and groundwater monitoring wells.

   B. Dairy wash water conveyance structures, pumping facilities, flow meter locations, discharge points, discharge mixing points with irrigation water supplies, drainage ditches, drainage controls structures (berms, levees, etc.), and drainage easements.

   C. NMP must include a detailed description of how the Discharger plans to mix dairy wash water and/or storm water from impoundments with fresh groundwater; and how the blended water will be conveyed to the fields for crop irrigation. Description must include mixture and application methods, such as mixing dairy wash water and/or storm water with fresh water in a concrete or lined structure before transporting to crop fields, or other methodology.

   D. Type of crops grown, crop rotation schedule, and locations.

   E. Identify each field that is not in the CAF area but that is under the control of the Discharger or any field utilizing dairy wash water from the Discharger that is within the same hydrologic unit or sub-unit (consult Water Board staff or Lahontan Water Board Basin Plan) of the CAF and indicate if dairy wash water is applied.

   F. Information on who owns and/or leases the field.

   G. All potential surface waters or conduits to surface waters, and residential and agricultural wells that are within 100 feet of any land application area.

2. Nutrient Budget

   The NMP must describe a nutrient budget for each land application area. The nutrient budget must establish planned rates of nutrient applications for each crop based on soil test results, manure, dairy wash water, irrigation water analyses, and crop nutrient requirements. The Nutrient Budget must include the following information:

A. The amount of application of manure, dairy wash water, and other fertilizers for each crop in each land application area.

B. The method of manure, dairy wash water, and other fertilizers applied to each crop in each land application area.

C. The timing of applications for each crop in each land application area and the basis for the timing.

3. Soil Sampling

   Composite soil samples must be collected in each cropped area as recommended by a California Certified Nutrient Management Agronomist Specialist. Samples must be analyzed for Nitrate as nitrogen, organic matter, and total dissolved solids at depths between 1 to 3 feet beneath the field surface on a frequency of five years.

4. Nutrient Application Rates

   The NMP must describe the proposed nutrient application rates. Nitrogen application rates to each application area should not exceed 1.4 times the anticipated nitrogen removal in forage, unless specifically recommended by a certified agronomist that finds such application will be in a manner protective of groundwater and approved by the Lahontan Water Board's Executive Officer.

5. Nutrient Removal Calculations

   The NMP must describe the method and information that will be used to calculate nitrogen removal. The NMP must also describe how the Annual Report calculations will be adjusted based on seasonal circumstances and yearly data. The Discharger must keep records of the types of crops raised in each location; date and types of crops planted; number of harvests from each crop; total dry weight of each harvest in tons; total crop moisture percentage; total nitrogen dry weight; total amount of fixed solids; and crop tissue sampling results per harvest for total nitrogen where manure or dairy wash water is applied for each year. An example nutrient management plan summary report tabulation sheet is on the page 5 of this guideline. Any data collected must be kept for minimum of five years.

6. Risk Assessment

   The NMP must describe how the agronomic application for the prior year will be assessed in the Annual Reports, including method for determining the nutrient balance for each field for the prior year and making any adjustments in nitrogen application or crop rotations for the upcoming year.

7. Statement and Certification

   The following statements and certifications must be made in the NMP.

   A. The NMP must include the signature of a certified specialist and a statement certifying the preparer is qualified to make crop nutrient management recommendations and the NMP uses current best management practices. Authorized specialists include Professional Soil Scientists, Professional Agronomists, Crop Advisors certified by the American Society of Agronomy, Technical Service Providers certified in nutrient management in California by the Natural Resources Conservation Service (NRCS), and NRCS certified planners with job approval authority in NRCS standard 590 Nutrient Management.

NUTRIENT MANAGEMENT SUMMARY REPORT

CAF Name: _____ WDID No.: _____

Crop harvest calendar year: _____ Submittal date: _____

Site location information	Crop type	Total acres	Total nitrogen applied (LB)	Total nitrogen removed (LB)	Ratio of nitrogen applied to nitrogen removed (A/R)	Nitrogen applied minus nitrogen removed, 3-year rolling average (LB)	Harvest date(s)	Amount harvested (tons)

ATTACHMENT C

STANDARD PROVISIONS
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger must allow Lahontan Water Board staff, upon presentation of credentials, to:

a. Enter upon premises at reasonable times where an effluent source is located or in which any required records are kept;

b. Access and copy at reasonable times any records relating to the discharge or relating to compliance with the waste discharge requirements;

c. Inspect monitoring and control equipment, practices, or operations regulated or required under this Order at reasonable times; and

d. Sample or monitor at reasonable times, for the purpose of assuring compliance with this Order or as otherwise authorized by the Water Code, any substances or parameters at this location.

2. Reporting Requirements

a. Pursuant to California Water Code 13267(b), the Discharger must report any noncompliance that may endanger human health or the environment. The Discharger must immediately notify the Lahontan Water Board after becoming aware of when an adverse condition occurred as a result of this discharge; a written report shall be provided within ten days of the time the Discharger becomes aware of the incident. The written report shall contain a description of the noncompliance and its cause, the period of noncompliance, the anticipated time to achieve full compliance, and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. A final certified report must be submitted through the online GeoTracker system. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, sanitary sewer overflows, or damage to control facilities that could affect compliance.

b. Pursuant to California Water Code Section 13260 (c), any proposed material changes in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Lahontan Water Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.

c. The owner(s) of, and Discharger upon, property subject to waste discharge requirements shall be considered to have a continuing responsibility for ensuring compliance with applicable waste discharge requirements in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the waste discharge requirements shall be reported to the Lahontan Water Board. Notification of applicable waste discharge requirements shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Lahontan Water Board.

d. If a Discharger becomes aware that any information submitted to the Lahontan Water Board is incorrect, the Discharger shall immediately notify the Lahontan Water Board, in writing, and correct that information.

e. Reports required by the waste discharge requirements, and other information requested by the Lahontan Water Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1000) for each day of violation.

f. If the Discharger becomes aware that their waste discharge requirements are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Lahontan Water Board in writing and request that their waste discharge requirements be rescinded.

3. Right to Revise Waste Discharge Requirements

The Lahontan Water Board reserves the privilege of changing all or any portion of the waste discharge requirements upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the waste discharge requirements may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and reissuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the waste discharge requirements which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the waste discharge requirements. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the waste discharge requirements.

7. Waste Discharge Requirement Actions

The waste discharge requirements may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the waste discharge requirements conditions.

8. Property Rights

The waste discharge requirements do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the waste discharge requirements including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the waste discharge requirements, monitoring and reporting requirements, and sampling and analysis plan shall be kept and maintained by the Discharger and always be available to operating personnel.

11. Severability

Provisions of the waste discharge requirements are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MONITORING AND REPORTING PROGRAM

R6-2025-0016
WDID NO. 6B368010002

FOR

DESERT OASIS DAIRY

San Bernardino County

This Monitoring and Reporting Program (MRP) No. R6-2025-0016 is issued to Jack Van der Holst (Discharger) for the Desert Oasis Dairy (Facility) pursuant to California Water Code (CWC), section 13267 and incorporates requirements for monitoring, reporting, and record-keeping of manure, dairy wash water, supply water, storm water, crop fields soils, plant tissues, and groundwater, as well as general Facility operations and maintenance. The technical reports required by Board Order R6-2025- 0016 and MRP No. R6-2025-0016 are necessary to assure compliance with the Waste Discharge Requirements (WDRs). Therefore, the burden, including costs, of these reports, bears a reasonable relationship to the need for the report and the benefits to be obtained from the reports.

I. MONITORING

The Discharger must comply with the monitoring requirements outlined below. All monitoring and inspecting activities must be documented, and all sampling must be conducted in accordance with an approved Sampling and Analysis Plan (SAP) that includes quality assurance and quality control standards and procedures, as described in the General Provisions for Monitoring and Reporting (Attachment B of this MRP).

All samples collected in accordance with this MRP, except for field parameters, are to be analyzed by a California state-certified laboratory using United States Environmental Protection Agency (USEPA) analytical methods or the most recently approved SW-846 USEPA method or other equivalent USEPA method. An alternative method may be used if acceptable to the Executive Officer.

A. Groundwater

The groundwater monitoring program monitors the quality of groundwater upgradient (background) and downgradient of the Facility through the collection of groundwater samples for laboratory analysis and field measurements of water quality parameters.

1. Monitoring Points

   The Facility has three onsite groundwater monitoring wells, two of which are nested wells: MWF-1 (09N02W03A-4 and 09N02W03A-5), MWF-2 (09N02W02E-6), and MWF-3 (09N02W03E-1, 09N02W03E-2, and 09N02W03E-3). Board Order No. R6-2025-0016 requires the Discharger to establish a groundwater monitoring network to adequately monitor upgradient and downgradient of the Facility.

2. Depth to Groundwater

   Prior to purging and sampling, the Discharger must measure and record the depth below the ground surface of the static groundwater elevation (feet below ground surface [bgs]) in all groundwater monitoring wells. The measurements must be accurate to the nearest 0.01 foot.

3. Groundwater Purging and Sampling

   Prior to sampling, all groundwater monitoring wells must be purged using either standard or low-flow techniques until dissolved oxygen (DO), electrical conductivity, pH, temperature, and turbidity of extracted well water have stabilized. These parameters will be considered stable when three consecutive readings have pH values within +/- 0.1 pH units, temperature values within +/- two (2) degrees Celsius, and electrical conductivity values within +/- three (3) percent.

4. Constituents of Concern, General Minerals, and Field Parameters

   The Discharger must monitor, at each groundwater monitoring well, all constituents of concern (COCs), general minerals, and field parameters in accordance with the frequencies listed in Attachment A of this MRP.

   For the first three years following adoption of Board Order No. R6-2025-0016, the Discharger must monitor all existing monitoring wells and supply wells annually for the general minerals listed in Attachment A (of this MRP) to establish a water quality data set for each well. As new wells are installed, the Discharger must monitor each new well annually for the first three years for the general minerals listed in Attachment A of this MRP. Once the initial 3 years of data has been collected, the Discharger must monitor general minerals in each well every 5 years thereafter.

5. Calibration Documentation

   The Discharger must document instrument calibration and performance checks to verify proper operation of the field monitoring equipment.

6. Locational Data

   Permanent groundwater sampling locations shall be surveyed by a California registered surveyor. The surveyed locational information for these sampling points shall be submitted using the Geo_XY file to the GeoTracker database.

B. Storm Water Ponds

Monitoring of storm water and storm water ponds must be conducted, and the results documented on field data sheets.

1. Inspections

The Discharger must visually inspect the pond weekly to determine if there is any presence of storm water or other liquid waste (i.e. liquid manure), evidence of overflow, discharge outside impoundment, and indication of loss of integrity or areas needing maintenance or repair. If storm water or other liquid waste is observed, the Discharger must estimate the volume of liquid (gallons) or depth of liquid (inches or feet) in the ponds. If there is nothing noteworthy for a given week, that must be noted.

2. Storm Events

a. The Discharger must record the date (day), amount (inches), and duration of rainfall events producing storm water runoff into storm water impoundments. Site-specific rain gauge data may be reported provided National Weather Service standards for equipment, siting, and exposure have been followed for rain gauges.

b. Approximate volumes of storm water runoff produced (gallons) or approximate depth of water in storm water impoundments (feet) must be recorded after each storm event.

c. Should storm water overtop or spill from storm water impoundments or crop fields into a surface water, the Discharger must record the dates, time, and estimate of volume spilled in gallons for each event.

d. If there were no storm events for the reporting period, the Discharger must report as such.

C. Nutrients

The Discharger must implement the approved Nutrient Management Plan (NMP) and monitor dairy wash water, supply water, manure, plant tissue, and soil as outlined below. This information must be recorded and used to develop, revise, and implement the NMP.

1. Nutrient Management Plan

The Discharger must document the information included on the nutrient management summary report tabulation sheet contained in Board Order R6-2025-0016 Attachment B, Nutrient Management Plan Requirements.

2. Dairy Wash Water Applied to Crop Fields

Record the volume of dairy wash water in gallons and the volume of freshwater (supply water) blended with dairy wash water that are applied to

each crop field from plant to harvest and include the site name or number for each crop field. The Discharger must be capable of measuring both dairy wash water and freshwater volumes prior to application.

3. Constituents of Concern and Field Parameters

   The Discharger must monitor dairy wash water at the wet well and supply water for all constituents of concern (COCs) and field parameters in accordance with the frequencies listed in Attachment A of this MRP.

4. Manure

   The Discharger must record the dry weight (tons) of manure applied to each onsite crop field (in control of the Discharger) and the total dry weight (tons) of manure exported offsite. The name of the landowner and address of the property where manure has been exported offsite must also be recorded.

   Twice per year (once per each semi-annual period), the Discharger must conduct laboratory analyses for total nitrogen and percent moisture.

5. Plant Tissue Monitoring

   The Discharger must estimate and record the percent moisture and total weight (tons) of harvested plant material removed from each crop field. The Discharger must provide the method of estimation used to determine the percent moisture content and total weight of harvested plant material in the approved NMP submittal as required in Board Order Section VI.B.1.

6. Soil Sampling

   The Discharger must conduct soil sampling in each cropped area. The Discharger must conduct this soil sampling in accordance with the approved NMP submittal required in Board Order Section VI.B.1. At a minimum, one composite soil sample within each crop field must be analyzed for the constituents outlined in the NMP.

   The first soil sampling must be conducted and submitted with the first Annual Report following the adoption of the Board Order and then sampled and reported every five years thereafter.

II. DATA ANALYSIS

A. Time series plots must be prepared for all constituents sampled in groundwater to determine whether concentrations are increasing, decreasing, or staying the same for each monitoring well and supply well.

B. The Discharger must compare concentrations for all constituents sampled in downgradient groundwater monitoring wells to constituent concentrations in the background groundwater monitoring well and prepare a narrative of that comparison.

C. For those constituents sampled that have a receiving water limit established in Board Order No. R6-2025-0016, Section I.A, compare the constituent concentration in each groundwater monitoring well for the reporting period to the receiving water limit value and prepare a narrative of that comparison.

III. REPORTING REQUIREMENTS

The Discharger must comply with the following reporting requirements.

A. Submittal of Electronic Laboratory Data

All laboratory data collected during the corresponding reporting period (Table 3), must be submitted electronically to the Water Board by uploading to the State Water Board's GeoTracker system under Global Identification number WDR100038942, per the following schedule. The laboratory data must be uploaded in Electronic Data Format (EDF).

Table 3. Laboratory Reporting Schedule

Sampling and Reporting Period	EDF Upload Due Date
January 1 – June 30	July 31
July 1 – December 31	January 30

B. Scheduled Reports to be Filed with the Water Board

The Discharger must submit the following periodic reports (Table 4), including all water and soil monitoring data collected during the corresponding reporting period, electronically to the Water Board by uploading to the State Water Board's GeoTracker system under Global Identification number WDR100027966, per the schedule in Table 4.

Table 4. Monitoring and Reporting Schedule

Report Name	Sampling and Reporting Period	Report Due Date
First Semi-Annual Report	January 1 – June 30	September 30
Second Semi-Annual Report	July 1 – December 31	March 31
Annual Report	January 1 – December 31	March 31

The Discharger must use the example form provided in Attachment C of this MRP, or other form with the same information, as a cover letter for all reports submitted to the Water Board associated with this MRP.

1. Semi-Annual Monitoring Reports

Each semi-annual self-monitoring report must include, but not be limited to, the following information.

a. A map and/or aerial photograph showing the well locations, impoundments, irrigated crop areas, and other Facility features.

b. All laboratory, field data, and visual observations collected during the reporting period, as outlined in MRP, Section I.A, Section I.B, Section I.C.2, and Section I.C.4.

c. All data analyses performed during the reporting period, as outlined in MRP, Section II.

d. Tabulated results of all sampling and laboratory analyses collected in compliance with MRP, Section I.A, Section I.B, Section I.C.2, and Section I.C.4, including historical (last ten years at minimum) and current reporting period data.

e. A written explanation for all violations identified during the reporting period, including dates and cause of violations and measures to prevent violation reoccurrence. Include a specific assessment as to whether any data indicate a violation of receiving water quality objectives as a result of the discharge.

f. Any operational problems and maintenance activities affecting Facility operation and waste management, including any corrective actions taken and/or a schedule for completion of corrective actions, if needed.

g. Copies of all field and well sampling data sheets for the reporting period.

h. Copies of all laboratory analytical reports for the reporting period.

i. Where additional data are collected above minimum monitoring requirements, that additional data will be reported.

j. The Discharger must calculate, and illustrate on a site plan and/or aerial photograph, the following aquifer characteristics: the depth to groundwater (feet bgs) in each groundwater monitoring well; the static water level (feet above mean sea level) in each groundwater monitoring well; the slope of the groundwater gradient (feet/feet); the direction of the groundwater gradient beneath and around the Facility (degrees from true north); the velocity of groundwater flow (feet/year); and the current groundwater surface elevation contours for the reporting period.

2. Annual Monitoring Reports

Each annual self-monitoring report must include, but not be limited to, the following information.

a. A scaled Facility site map showing Facility components and monitoring well locations, and the most current groundwater surface elevation contours.

b. All laboratory analytical reports and field data collected during the reporting period, as outlined in MRP, Section I.C.1, Section I.C.3, Section I.C.5, and Section I.C.6.

c. Calibration methods and any discrepancies of any meters used for field parameter evaluations after calibration is performed.

d. A brief chronological summary of dates of any operational problems and maintenance activities that may impact water quality at the site.

e. A summary of the results of implementing the NMP, including a summary of the nutrient balance for each crop field for the reporting year and whether any adjustments in nitrogen application or crop rotations will be necessary for the upcoming year.

f. The Discharger must collect and report the following data annually: herd size, type of cows, amount of fertilizer application, amount of cropped acreage and types of crops, amount of manure exported or treated, amount of acreage to which liquid and solid manure is applied, the amount of acreage applied to leguminous crops, the amount of nitrogen uptake in the various types of crops, the yield of the crops, and the amount of nitrogen in irrigation water and the volume of water applied.

C. Spill and Incident Reporting

The following reports must be submitted to the Water Board as specified below.

1. Spill and Incident Reporting

a. Within 24 hours of becoming aware of any spill or incident that results in noncompliance with the Board Order, the Discharger must report the occurrence of noncompliance to the Water Board's Victorville office by calling the general telephone number listed below. The report must include the time, date, place, and nature of noncompliance, and the name and number of the reporting person. If prompted to leave a voicemail, the message must include the same reporting information listed above. Spills of hazardous substances must be reported to the California Office of Emergency Services (Cal OES) at 1-800-852-7550.

Victorville office: 760-241-6583

b. Within two weeks of becoming aware of the incident, the Discharger must submit a written incident report to the Water Board. The report must contain a description of the noncompliance, its causes, duration, associated volumes of discharges, and the actual or anticipated time for achieving compliance. The report must include complete details of the steps that the Discharger has taken or intends to take, to prevent recurrence.

c. In the event of a discharge to a surface water, the Discharger must immediately collect a sample of the discharge for the parameters listed below. In addition, the surface water that the discharge has entered must be sampled upstream of where the discharge enters the water and immediately downstream of the entrance point. The samples must be analyzed using USEPA methods for the following constituents at a California certified laboratory and the incident report submitted to the Water Board within 72 hours of receiving laboratory results. A report of the spill or discharge event to a surface water must also be included in the Annual Report required under MRP Section III.B.2.

i. Coliform, fecal
ii. Nitrate-nitrogen
iii. Total suspended solids
iv. Total Kjeldahl nitrogen

D. Significant Earthquake Event

After a significant[1] or greater earthquake event at or near the Facility, the Discharger must notify the Water Board within 72 hours of any physical damage to infrastructure, wastewater collection components, containment features, or groundwater monitoring systems. All repairs must be documented in the Annual Report required under MRP Section III.B.2.

[1] A significant earthquake is a seismic event classified according to the United States Geological Survey (USGS) Earthquake Hazard Program as a moderate earthquake measuring between 5 and 5.9 on the Richter scale, or higher. The Discharger may use the Modified Mercalli Intensity Scale VI or higher for equivalent ground shaking generated by a significant earthquake of Richter magnitude 5.0 or higher as contained with the USGS Earthquake Hazard Program Magnitude/Intensity Comparison chart found at https://earthquake.usgs.gov

E. Extreme Weather Event

After an extreme weather event[2] at or near the Facility, the Discharger must notify the Water Board within 72 hours of any physical damage to infrastructure, wastewater collection components, containment features, or groundwater monitoring systems. All repairs must be documented in the Annual Report required under MRP Section III.B.2.

F. Sample and Analysis Plan

No later than 90 days following adoption of the Order, the Discharger must submit a revised Sampling and Analysis Plan (SAP) for Water Board staff review and concurrence, including procedures for sampling of and analysis for dairy wash water, groundwater monitoring wells, manure, tissue samples, and soils at the crop field. The procedures included in the SAP must be in accordance with the approved NMP. Periodic updates to the SAP may be necessary to reflect changes in the monitoring network (i.e. new groundwater monitoring wells installed), sampling procedures, or analytical methods and must be submitted for Water Board staff review and concurrence prior to implementation.

G. Monitoring Well Logs

All groundwater monitoring wells and all other borings installed to satisfy the requirements of this MRP must be drilled by a licensed drilling contractor and must be logged during drilling under the direct supervision of either a California licensed Professional Geologist or Professional Civil Engineer with expertise in stratigraphic well logging. Such logs must be submitted to the Water Board within 90 days following completion of fieldwork and uploaded to the State Water Board's GeoTracker system under Global Identification number WDR100038942.

H. Monitoring Well Repairs

When groundwater monitoring wells are repaired, replaced, destroyed, or installed, a work plan must be prepared under the direct supervision of either a California licensed Professional Geologist or Professional Civil Engineer with competence in groundwater hydrogeology and submitted to Water Board staff for review and acceptance prior to the beginning of any work.

[2] An extreme weather event refers to a weather phenomenon with enough intensity to cause physical damage to the Facility or any of its infrastructure or disruption in wastewater conveyance or treatment systems. Extreme weather refers to unusual, severe, or unseasonal weather conditions, and can include extreme heat, excessive or unusual precipitation and flooding, wildfires, severe wind, and extended droughts.

I. General Provisions

The Discharger must comply with Attachment B, "General Provisions for Monitoring and Reporting," which is attached to and made part of this MRP.

J. Failure to Furnish Reports

Any person failing or refusing to furnish technical or monitoring reports or falsifying any information provided therein is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation pursuant to CWC, section 13268.

K. Electronic Reporting Requirements

The Discharger must submit reports, including soil and water data, electronically over the internet to the State Water Resources Control Board's GeoTracker system. This requirement is in addition to, and not superseded by, any other applicable reporting requirement. The Discharger must provide the monitoring report to the Water Board, as specified in this MRP, and upload the full monitoring report into GeoTracker, as stipulated by CCR, title 23.

For all other types of documents and correspondence, please send it to the Water Board's email address at Lahontan@waterboards.ca.gov and include the WDID No. and Facility name in the subject line.

Ordered by: _____ Dated: May 13, 2025

BEN LETTON
EXECUTIVE OFFICER

Attachments:
A. Water Quality Monitoring Program
B. General Provisions for Monitoring and Reporting, dated September 1, 1994
C. Example Cover Form for Self-Monitoring Reports

ATTACHMENT A – WATER QUALITY MONITORING PROGRAM

Groundwater Monitoring Wells				
Constituent/Parameter	**Units**	**Sample Type**	**Sample Frequency**	**Reporting Frequency**
Field Parameters				
pH	pH units	field	Semi-annual	Semi-annual
Electrical conductivity (EC)	microSiemens per centimeter (µS/cm)	field	Semi-annual	Semi-annual
Depth to Groundwater	feet below ground surface	field	Semi-annual	Semi-annual
Oxidation reduction potential	millivolts	field	Semi-annual	Semi-annual
Temperature	degree Fahrenheit or Celsius	field	Semi-annual	Semi-annual
Turbidity	NTU	field	Semi-annual	Semi-annual
Constituents of Concern				
Nitrate as nitrogen	mg/L	grab	Semi-annual	Semi-annual
Organic Nitrogen	mg/L	grab	Semi-annual	Semi-annual
Ammonia-N	mg/L	grab	Semi-annual	Semi-annual
Total Nitrogen	mg/L	grab	Semi-annual	Semi-annual
Total dissolved solids	mg/L	grab	Semi-annual	Semi-annual
General Minerals				
Anion sum	milliequivalents per liter (meq/L)	grab	Annual first 3 years following adoption of the Order and for each new well installed, then every 5 years thereafter.	Annual first 3 years following adoption of the Order and for each new well installed, then every 5 years thereafter.
Bicarbonate	mg/L	grab		
Calcium	mg/L	grab		
Carbonate	mg/L	grab		
Cation sum	milliequivalents per liter	grab		
Chloride	mg/L	grab		
Fluoride	mg/L	grab		
Magnesium	mg/L	grab		
Potassium	mg/L	grab		
Sodium	mg/L	grab		
Sulfate	mg/L	grab		
Total alkalinity	mg/L	grab		
Sulfate	mg/L	grab		

Dairy Wash Water				
Constituent/Parameter	**Units**	**Sample Type**	**Sample Frequency**	**Reporting Frequency**
Field Parameters				
pH	pH units	field	Semi-annual	Semi-annual
Electrical conductivity (EC)	µS/cm	field	Semi-annual	Semi-annual
Constituents of Concern				
Nitrate as nitrogen	mg/L	grab	Semi-annual	Semi-annual
Organic Nitrogen	mg/L	grab	Semi-annual	Semi-annual
Ammonia-N	mg/L	grab	Semi-annual	Semi-annual
Total Nitrogen	mg/L	grab	Semi-annual	Semi-annual
Total dissolved solids	mg/L	grab	Semi-annual	Semi-annual

Supply Water Wells				
Constituent/Parameter	**Units**	**Sample Type**	**Sample Frequency**	**Reporting Frequency**
Constituents of Concern				
Nitrate as nitrogen	mg/L	grab	Semi-annual	Semi-annual
Total dissolved solids	mg/L	grab	Semi-annual	Semi-annual

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

GENERAL PROVISIONS
FOR MONITORING AND REPORTING

1. SAMPLING AND ANALYSIS

a. All analyses shall be performed in accordance with the current edition(s) of the following documents:

   i. Standard Methods for the Examination of Water and Wastewater

   ii. Methods for Chemical Analysis of Water and Wastes, EPA

b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.

c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.

d. The Discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.

e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.

f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.

g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

3. REPORTING

a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.

b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.

d. Monitoring reports shall be signed by:

i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;

ii. In the case of a partnership, by a general partner;

iii. In the case of a sole proprietorship,by the proprietor; or

iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

e. Monitoring reports are to include the following:

i. Name and telephone number of individual who can answer questions about the report.

ii. The Monitoring and Reporting Program Number.

iii. WDID Number.

f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation under Section 13268 of the Water Code.

Date _____

Attachment C

California Regional Water Quality Control
Board Lahontan Region
15095 Amargosa Road
Building 2, Suite 210
Victorville, CA 92394

Facility Name: _____

_____

Address: _____

_____

_____

_____

Contact Person: _____

Job Title: _____

Phone: _____

Email: _____

WDR/NPDES Order Number: _____

WDID Number: _____

Type of Report (circle one)**:** **Monthly Quarterly Semi-Annual Annual Other**

Month(s) (circle applicable month(s)***:** **JAN FEB MAR APR MAY JUN**

JUL AUG SEP OCT NOV DEC

***annual Reports** (circle the first month of the reporting period)

Year: _____

Violation(s)? (Please check one): _____**NO** _____ **YES***

***If YES is marked complete a-g (Attach Additional information as necessary)**

a) Brief Description of Violation: _____

_____

_____

_____

_____

b) Section(s) of WDRs/NPDES Permit Violated: _____

_____

_____

c) Reported Value(s) or Volume: _____

d) WDRs/NPDES Limit/Condition: _____

e) Date(s) and Duration of Violation(s): _____

f) Explanation of Cause(s): _____

g) Corrective Action(s)
(Specify actions taken and a schedule for actions to be taken)

_____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

If you have any questions or require additional information, please contact _____at the number provided above.

Sincerely,

Signature:_____

Name: _____

Title: _____